

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2005/000036

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G01N 33/573, G01N 33/577, C07K 16/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G01N, C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	QIN QIU-PING ET AL, "Molecular Distinction of Circulating Pregnancy-Associated Plasma Protein A in Myocardial Infarction and Pregnancy", Clinical Chemistry January 7, 2005, Vol. 51, No. 1, p. 75-83 --	1-16
X	WO 02056015 A1 (MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH), 18 July 2002 (18.07.2002), page 6, line 12 - line 20; page 9, line 3 - line 6; page 17, line 5 - page 18, line 19, page 21, line 9 - line 25, claims 1-4,7-10,17	15-16
A	--	1-14

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

25 May 2005

Date of mailing of the international search report

26 -05- 2005

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2005/000036

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 0054806 A1 (MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH ET AL), 21 Sept 2000 (21.09.2000), page 4, line 8 - line 10; page 5, line 13 - line 17; page 5, line 22 - line 32, page 6, line 21 - line 23, page 8, line 34 - page 9, line 3, page 25, line 20 - page 26, line 28, page 38, line 13 - line 25, claims 1,2,7,12,13,22	15-16
A	--	1-14
A	COSIN-SALES JUAN ET AL, "PAPP-A, ProMBP, and PAPP-A/ProMBP Ratio Are Related to the Extent of Angiographic Coronary Artery Disease in Stable Angina Patients", Journal of the American College of Cardiology" March 19, 2003, Vol. 41, No. 6 Supplement A, p. 359A CONF - 52nd Annual Scientific Session of the American College of Cardiology, abstract	1-16
A	--	
A	LUND JUHA ET AL, "Circulating Pregnancy-Associated Plasma Protein A Predicts Outcome in Patients With Acute Coronary Syndrome but No Troponin I Elevation", Circulation 2003, Vol. 108, p. 1924-1926, abstract, page 1924, column 2, paragraph 3	1-16
A	--	
A	KHOSRAVI JAVAD ET AL, "Pregnancy associated plasma protein-A: ultrasensitive immunoassay and determination in coronary heart disease", Clinical Biochemistry 2002, Vol. 35, p. 531-538, ISSN:0009-9120, page 532, column 2, paragraph 3, page 533, column 2, paragraph 2, page 536, column 2, paragraph 2	1-16
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INTERNATIONAL SEARCH REPORT

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>QIN QIU-PING ET AL, "Double-monoclonal immunofluorometric assays for pregnancy-associated plasma protein A/proeosinophil major basic protein (PAPP-A/proMBP) complex in first-trimester maternal serum screening for Down syndrome", Clinical Chemistry 1997, Vol. 43, No. 12, p. 2323-2332, page 2324, column 1, paragraph 4, column 2, paragraph 2</p> <p>-- -----</p>	1-16

INTERNATIONAL SEARCH REPORTInternational application No.
PCT/FI 2005/000036**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 15
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

See extra sheet.

.../...
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Box II.2

Present claim 15 relates to a compound defined by reference to a desirable characteristic or property, namely that it should bind free PAPP-A but not PAPP-A complexed to proMBP. The claim covers all compounds having this characteristic or property, whereas the application provides support for a limited number of such compounds. Additionally, previously known compounds may be included in the scope of the present claim. In the present case, the claim so lacks support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claim also lacks clarity (Article 6 PCT). An attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible.

Consequently, the search has been carried out for those parts of the claim which appear to be clear, supported and disclosed, namely those parts relating to antibodies, antibody fragments, aptamers and protein scaffold derived binders such as affibodies, which bind to free PAPP-A but not to PAPP-A complexed to proMBP.

INTERNATIONAL SEARCH REPORT

Information on patent family members

30/04/2005

International application No.

PCT/FI 2005/000036

WO 02056015 A1 18/07/2002

CA	2434512 A	18/07/2002
EP	1350109 A	08/10/2003
JP	2004531696 T	14/10/2004
US	6500630 B	31/12/2002
US	6699675 B	02/03/2004
US	20020132278 A	19/09/2002
US	20030003521 A	02/01/2003
US	20040197844 A	07/10/2004

WO 0054806 A1 21/09/2000

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JP	2002538804 T	19/11/2002
